

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 60326WO (49991)	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US05/07152	International filing date (<i>day/month/year</i>) 04 March 2005 (04.03.2005)	(Earliest) Priority Date (<i>day/month/year</i>) 05 March 2004 (05.03.2004)
Applicant WATERS INVESTMENTS LIMITED		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 2B

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

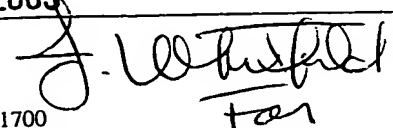
☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : B01D 15/08 US CL : 210/198.2, 502.1, 656 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 210/198.2, 502.1, 656 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,469,597 A (MOTT) 04 September 1984 (04.09.2005), column 4, lines 37-53.	1-236
Y	US 6,080,219 A (JHA et al) 27 June 2000 (27.06.2000), column 3, lines 15-19.	1-236
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 05 May 2005 (05.05.2005)		Date of mailing of the international search report 20 MAY 2005
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Ernest G. Therkorn Telephone No. (571) 272-1700 

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Box IV TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

A frit (44) includes a porous support structure having a plurality of void spaces, where a plurality of secondary particles (46) are filled in the void spaces, the secondary particles (46) being dimensioned with respect to the void spaces such that the frit (44) retains packing materials with diameters of less than about 2.5 microns. Preferably one or more frits (44) are received in a high pressure liquid chromatography (HPLC) chromatographic column, where the column includes fittings and filter assemblies for receiving frits (44) at its inlet and outlet. The frit (44) can be constructed from a porous support structure with void spaces or pores that are filled with secondary particles (46) smaller than those used to manufacture the support. The particles (46) contained in the void spaces are large enough to be retained by the support, but small enough to create a finer network of interconnected channels within the support's void spaces that are capable of retaining sub-2.5 micrometer particles.